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(54) **Supporting device for at least one electrical unit of electrically driveable tools**

Stützvorrichtung für wenigstens eine elektrische Einheit eines elektrisch antreibbaren Werkzeugs

Dispositif de support pour au moins une unité électrique d'outils pouvant être entraînés électriquement

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Description

Prior Art

[0001] Supporting devices for at least one electrical unit of electrically driveable tools are well-known. The supporting devices comprise a base plate to which the electrical unit is attachable and a receptacle unit in which the electrical unit is arrangeable. Such devices are known from US2010083513A1, US2012061117A1, US2005061524A1, EP2008776A1 or DE102010003545A1.

Summary of the Invention

[0002] According to claim 1, the invention relates to a supporting device, in particular a garden tool supporting device, for at least one electrical unit of electrically driveable tools, in particular electrically driveable garden tools. The supporting device comprises at least one base plate to which the electrical unit is attachable and at least one receptacle unit in which the electrical unit is arrangeable.

[0003] The supporting device according to the invention further comprises at least one sealing unit to waterproof-seal the receptacle unit, wherein the sealing unit comprises at least one sealing element which is arrangeable at the receptacle unit. The base plate is preferably provided to support the electrical unit. Furthermore, the base plate is preferably located in a housing of the electrically driveable garden tool. Thus, the base plate is preferably surrounded by the housing of the electrically driveable garden tool for the most part.

[0004] The electrical unit can be attached to the base plate via a positive and/or a non-positive connection. For this, the electrical unit can be directly or indirectly attached to the base plate. For example, the electrical unit can be attached via a housing to the base plate, wherein the housing of the electrical unit forms a part of the receptacle unit, or electrical parts of the electrical unit can be directly attached to the base plate. Preferably, the electrical unit comprises at least one PCBA (printed circuit board assembly) or is embodied as a PCBA which is attachable to the base plate, wherein the PCBA is arrangeable in the receptacle unit. Moreover, the electrical unit comprises at least one electrical wire which extends from an inside of the receptacle unit to an outside of the receptacle unit. The sealing unit is further preferably provided to waterproof-seal a wire opening of the receptacle unit through which the electrical wire extends. For this, the sealing unit comprises at least one wire opening sealing element. The wire opening sealing element can be embodied integral with the sealing element or the wire opening sealing element can be embodied as an individual element which differs from the sealing element.

[0005] The sealing element can be embodied as a paper sealing element, as a rubber sealing element, as a plastic sealing element etc. The supporting device according to the invention has the advantage that in a con-

structively simple manner a high-level IP class requirement can advantageously be achieved. Therefore, an electrically driveable tool comprising the supporting device according to the invention can advantageously be used in wet conditions. Thus, a high ease of use can advantageously be achieved.

[0006] Moreover, the receptacle unit comprises at least one cover element to close at least one receptacle opening of at least one receptacle chamber of the receptacle unit. Preferably, the cover element is directly securable to the base plate via a positive and/or a non-positive connection. It is also possible that the cover element is pivotally movably supported at the base plate, to close the receptacle chamber. A maintenance and/or assembly opening can advantageously be achieved in a constructively simple manner, to maintain and/or assemble the electrical unit.

[0007] In a preferred embodiment of the supporting device according to the invention the sealing element is arranged, especially at least in a closed state of the receptacle chamber, between the cover element and a border portion of the receptacle chamber, which limits said receptacle opening. The sealing element preferably has a geometrical shape which corresponds to a geometrical shape of the border portion which limits the receptacle opening of the receptacle chamber of the receptacle unit. The sealing element can be fixedly secured to the cover element or to the receptacle chamber via a positive and/or a non-positive connection. It is also possible that the sealing element is clamped between the cover element and a border portion of the receptacle chamber at least in a closed state of the receptacle chamber. A secure closing and a secure waterproof-sealing of the receptacle chamber via the cover element and the sealing element can advantageously be achieved.

[0008] In addition, at least one receptacle element of the receptacle unit is formed integrally with the base plate. A cost-efficient receptacle unit can advantageously be achieved. Moreover, a constructively simple embodiment of the supporting device can advantageously be achieved, which allows a cost-efficient waterproof-sealing of the electrical unit.

[0009] Preferably, the receptacle element is embodied as a receptacle chamber of the receptacle unit, in which the electrical unit is arrangeable. Preferably, the receptacle element is embodied as a recess which forms the receptacle chamber of the receptacle unit, in which the electric unit is arrangeable. Additional components to receive the electrical unit can advantageously be omitted. Therefore, a component-saving supporting device can advantageously be achieved.

[0010] Also according to claim 1, in the supporting device according to the invention, the base plate is embodied as a heat sink base plate. The base plate is made of a material which ensures that heat is dissipated as quickly as possible. Preferably, the base plate is made of aluminum or of a different material which is considered expedient by a person skilled in the art. Therefore, a long

lifespan of the electrical unit can advantageously be achieved and an advantageous constant use of the electrically driveable tool which comprises the supporting device according to the invention can advantageously be ensured.

[0011] Moreover, an electrically driveable tool, in particular an electrically driveable garden tool, is proposed, which comprises at least one supporting device according to the invention. The electrically driveable tool can be energized by a portable accumulator or by a cable which can be connected with an electrical socket e.g. of a local power network. Preferably, the electrically driveable tool is embodied as an electrically driveable brushcutter. It is also possible that the garden tool supporting device is used in another garden tool, like a hedge trimmer, a leaf blower, a chain saw etc. The electrically driveable tool according to the invention has the advantage that a comfortable and safe usage can be realized. Thus an electrically driveable tool with a high ease of use can advantageously be achieved.

[0012] In a preferred embodiment of the electrically driveable tool according to the invention, the electrically driveable tool according to the invention further comprises at least one guidance rod to which the base plate is directly securable. Preferably, the guidance rod is made of a metallic material so that a large cooling surface for dissipating heat can advantageously be achieved. A compact arrangement of the supporting device according to the invention can advantageously be achieved.

[0013] In addition, the guidance rod is located adjacent to at least one further waterproof-sealed receptacle chamber of the receptacle unit, especially in a mounted state. The term "adjacent" shall define an arrangement of at least one element relative to at least one further element, wherein the element is located at a distance of less than 10 mm relative to the further element. Thus, the guidance rod is arranged at a distance of less than 10 mm relative to the further waterproof-sealed receptacle chamber of the receptacle unit. It is also possible that the guidance rod abuts on the further waterproof-sealed receptacle chamber of the receptacle unit, especially in a mounted state. Preferably, the further receptacle chamber of the receptacle unit, which the guidance rod is located adjacent to, is formed integrally with the base plate. The guidance rod can advantageously be used to guide at least one wire of the electrical. Therefore, the guidance rod has the function of a cable channel. For example the electrically driveable tool can comprise at least one electrical motor control unit arranged in the further waterproof-sealed receptacle chamber of the receptacle unit, wherein at least one electrical connection element of the electrical motor control unit emerges from the further waterproof-sealed receptacle chamber towards an inner portion of the guidance rod and therefrom to an electrical motor of the electrically driveable tool. Therefore, a protected connection between the electrical motor control unit and the electrical motor can advantageously be achieved, wherein the electrical motor control unit is pref-

erably waterproof-sealed. Therefore, the electrically driveable tool can advantageously be used in wet conditions.

[0014] Moreover, the base plate comprises a connection element which at least partly encompasses the guidance rod at least in a mounted state. The connection element is preferably embodied as a tubular extension. A stable connection between the base plate and the guidance rod can advantageously be achieved.

[0015] The supporting device according to the invention and/or the electrically driveable tool according to the invention is/are not to be limited to the utilization and the embodiment described above. In particular, the supporting device according to the invention and/or the electrically driveable tool can have a differing number of elements, components and units for a satisfying function as specified herein.

Brief Description of the Drawings

[0016] Further objects, features and advantages of the present invention will become apparent from reading the following detailed description, taking in conjunction the accompanying drawing wherein a particular embodiment of the invention is disclosed as an illustrative example.

Fig. 1 shows an electrically driveable tool according to the invention, comprising a supporting device according to the invention in a schematic representation,

Fig. 2 shows an exploded view of the supporting device according to the invention in a schematic representation,

Fig. 3 shows a detail view of a base plate of the supporting device according to the invention in a schematic representation and

Fig. 4 shows a detail view of the base plate, wherein an electrical unit is arranged in a housing which is attachable to the base plate.

Detailed Description of the Illustrative Embodiment

[0017] Figure 1 shows an electrically driveable tool 14 which comprises at least one supporting device 10. The electrically driveable tool 14 is embodied as an electrically driveable brushcutter. Therefore, the electrically driveable tool 14 is embodied as an electrically driveable garden tool. The electrically driveable tool 14 comprises a motor housing 36 to support an electrical motor 38 of the electrically driveable tool 14. Moreover, the electrically driveable tool 14 comprises a tool holder 40 which a cutting tool 42 can be mounted to. The cutting tool 42 can be embodied as a trimmer line cutting tool, as a blade-like cutting tool, as a saw-like cutting tool etc. The tool holder 40 is rotatably driveable by the electrical motor

38. Herein, the tool holder 40 is directly driveable by the electrical motor 38. The tool holder 40 is directly attached to the motor housing 36. It is also possible that the electrically driveable tool 14 comprises a gear 44 which the electrical motor 38 and the tool holder 40 are connected to. The gear 44 can be supported in a gear casing of the electrically driveable tool 14 or in the motor housing 36.

[0018] Moreover, the electrically driveable tool 14 comprises a housing 46 for electrical components, in which the supporting device 10 is arranged. The housing 46 for electrical components and the motor housing 36 are connected with each other via a guidance rod 30 of the electrically driveable tool 14. The motor housing 36 is arranged at one end of the guidance rod 30 and the housing 46 for electrical components is arranged at another end of the guidance rod 30. The electrically driveable tool 14 further comprises an energy supply connection unit 48 to which an energy supply unit 50 can be connected. The energy supply unit 50 is embodied as an accumulator unit. The energy supply connection unit 48 is arranged at the housing 46 for electrical components. Therefore, a general construction of the electrically driveable tool 14 is well-known to a person skilled in the art.

[0019] Figure 2 shows a detailed view of the supporting device 10 which is embodied as a garden tool supporting device. The supporting device 10 for at least one electrical unit 12 of the electrically driveable tool 14 comprises at least one base plate 16 to which the electrical unit 12 is attachable, at least one receptacle unit 18 in which the electrical unit 12 is arrangeable and at least one sealing unit 20 to waterproof-seal the receptacle unit 18. The sealing unit 20 comprises at least one sealing element 22 which is arrangeable at the receptacle unit 18. The sealing element 22 is embodied as a rubber sealing. It is also possible that the sealing element 22 is made of a different material which is considered expedient by a person skilled in the art.

[0020] Moreover, the receptacle unit 18 comprises at least one cover element 24 to close at least one receptacle opening of at least one receptacle chamber 26 of the receptacle unit 18. The cover element 24 is fixedly securable to the receptacle chamber 26. The sealing element 22 is arranged between the cover element 24 and a border portion 28 of the receptacle chamber 26, which limits the receptacle opening of the receptacle chamber 26. The electrical unit 12 is arranged in the receptacle chamber 26 of the receptacle unit 18. Herein, the electrical unit 12 is embodied as a potentiometer to adjust a rotation speed of the electrical motor 38. It is also possible that the electrical unit 12 is embodied as a different electrical unit 12 which is considered expedient by a person skilled in the art, e.g. a main PCBA 58 of the electrically driveable tool 14, provided to control all functions of the electrically driveable tool 14 etc. The border portion 28 of the receptacle chamber 26 can comprise at least one sealing groove in which the sealing element 22 can be arranged. It is also possible that the border portion 28 of the receptacle chamber 26 comprises a flat sealing sur-

face at which the sealing element 22 can be arranged.

[0021] The receptacle chamber 26 is embodied as a recess of the base plate 16. Therefore, the at least one receptacle element of the receptacle unit 18 is formed integrally with the base plate 16, wherein the receptacle element is embodied as the receptacle chamber 26 of the receptacle unit 18, in which the electrical unit 12 is arrangeable. The receptacle chamber 26 has an inner geometrical shape which corresponds to an outer geometrical shape of the electrical unit 12. Thus, the electrical unit 12 can be attached to the receptacle chamber 26 via a positive connection. It is also possible that the receptacle chamber 26 has an inner geometrical shape which is different from an outer geometrical shape of the electrical unit 12, wherein an inner dimension of the receptacle chamber 26 is larger than an outer dimension of the electrical unit 12 so that the electrical unit 12 can be arranged inside the receptacle chamber 26.

[0022] To secure the electrical unit 12 to the receptacle chamber 26 and thus to the base plate 16, the supporting device 10 comprises at least one fixing unit 52. The fixing unit 52 comprises at least one fixing element 54 provided to fixedly secure the electrical unit 12 to the receptacle chamber 26 and thus to the base plate 16. The fixing element 54 is embodied as a screw to fixedly secure the electrical unit 12 to the receptacle chamber 26 via a positive and/or a non-positive connection. It is also possible that the fixing element 54 is embodied as a different fixing element 54 which is considered expedient by a person skilled in the art, e.g. a snap-fit element, a bayonet catch element etc. The electrical unit 12 directly abuts on the base plate 16 to achieve a heat transfer from the electrical unit 12 to the base plate 16. The base plate 16 is embodied as a heat sink base plate. Herein, the base plate 16 is made of aluminum. It is also possible that the base plate 16 is made of a different material which has high heat conductivity and which is considered expedient by a person skilled in the art.

[0023] The base plate 16 is directly securable to the guidance rod 30. For this, the base plate 16 comprises a connection portion 34 which at least partly encompasses said guidance rod 30 at least in a mounted state. The connection portion 34 is embodied as a tubular extension of the base plate 16. Herein, the connection portion 34 has a semicircular-ring-shaped cross section. An inner dimension of the connection portion 34 corresponds to an outer dimension of the guidance rod 30. Therefore, the guidance rod 30 can be connected to the connection portion 34 via a positive connection and/or a non-positive connection. Furthermore, the connection portion 34 comprises at least one rib-like extension 60 (figure 3) to connect the guidance rod 30 and the connection portion 34 in a torque proof manner. The guidance rod 30 comprises a connection recess (not shown) which corresponds to the rib-like extension 60.

[0024] The electrical unit 12 further comprises at least one electrical wire 56 to electrical connect the electrical unit 12 to at least one further electrical unit (not shown)

or to the main PCBA 58 (shown in figure 3 in dashed lines) of the electrically driveable tool 14. The electrical wire 56 extends from an inside of the receptacle chamber 26 to an outside of the receptacle chamber 26 through a wire opening of the receptacle chamber 26. The sealing unit 20 either comprises at least one further sealing element to waterproof-seal the wire opening of the receptacle chamber 26, or the sealing element 22 arranged at the border portion 28 of the receptacle chamber 26 has a sealing extension to waterproof-seal the wire opening of the receptacle chamber 26. The further sealing element or the sealing extension of the sealing element 22 is embodied in such a way that the wire opening is waterproof-sealed when the electrical wire 56 extends through the wire opening.

[0025] The main PCBA 58 of the electrically driveable tool 14 also is arrangeable in a further receptacle chamber 32 of the receptacle unit 18. Thus, a further electrical unit, especially the main PCBA 58 of the electrically driveable tool 14, can be arranged at the base plate 16. The further receptacle chamber 32 is embodied as a recess of the base plate 16. Thus, the further receptacle chamber 32 is formed integrally with the base plate 16. Herein, the further receptacle chamber 32 is arranged at a side of the base plate 16 which is a far side of the base plate 16 with respect to a side at which the receptacle chamber 26 is arranged. The sealing unit 20 comprises a further sealing element 62 to waterproof-seal the further receptacle chamber 32. A border portion 64 of the further receptacle chamber 32 can comprise at least one sealing groove in which the further sealing element 62 can be arranged. It is also possible that the border portion 64 of the further receptacle chamber 32 comprises a flat sealing surface at which the further sealing element 62 can be arranged. The border portion 64 of the further receptacle chamber 32 is provided to limit a receptacle opening of the further receptacle chamber 32. Furthermore, the receptacle unit 18 comprises a further cover element (not shown) to close at least one receptacle opening of the further receptacle chamber 32 of the receptacle unit 18. The further cover element is fixedly securable to the further receptacle chamber 32. The further sealing element 62 is arranged between the further cover element and the border portion 64 of the further receptacle chamber 32.

[0026] The guidance rod 30 is located adjacent to the further waterproof-sealed receptacle chamber 32 of the receptacle unit 18. The guidance rod 30 is hollow. Herein, electrical wires 66 (shown in figure 3 as a dashed line) of the main PCBA 58 emerge from an inside of the further waterproof-sealed receptacle chamber 32 into an inner portion of the guidance rod 30. Thence, the electrical wires 66 of the main PCBA 58 extend to the electrical motor 38 to be connected to the latter. Therefore, the electrical wires 66 of the main PCBA 58 extend from the further waterproof-sealed receptacle chamber 32 to the motor housing 36 through the guidance rod 30, wherein the electrical wires 66 of the main PCBA 58 electrically

connect the electrical motor 38 to the main PCBA 58. The further sealing element 62 comprises at least one sealing extension to waterproof-seal a wire opening of the further waterproof-sealed receptacle chamber 32.

5 The further sealing element 62 is embodied in such a way that the wire opening of the further waterproof-sealed receptacle chamber 32 is waterproof-sealed when the electrical wires 66 of the main PCBA 58 extend through the wire opening of the further waterproof-sealed receptacle chamber 32.

10 **[0027]** Figure 4 shows an alternative or additional opportunity to attach the electrical unit 12 or a further electrical unit, e.g. the main PCBA 58 or a further, different PCBA, to the base plate 16. For this, the receptacle unit 18 comprises a housing unit 68 in which the electrical unit 12 or a further electrical unit is arrangeable. The housing unit 68 comprises a receptacle housing-shell 70 in which the electrical unit 12 or a further electrical unit is arrangeable. Furthermore, the housing unit 68 comprises a cover housing-shell 72 to close an opening of the receptacle housing-shell 70. The sealing unit 20 comprises a housing sealing element 74 to waterproof-seal the housing unit 68. The housing sealing element 74 comprises at least one sealing extension to waterproof-seal a wire opening of the housing unit 68. The housing sealing element 74 is embodied in such a way that the wire opening of the housing unit 68 is waterproof-sealed when at least one electrical wire of the electrical unit 12 or a further electrical unit extends through the wire opening of the housing unit 68. Moreover, the housing unit 68 is attachable directly to the base plate 16. Herein, the receptacle housing-shell 70 is fixedly securable to the base plate 16. The cover housing-shell 72 is fixedly securable to the receptacle housing-shell 70. The housing unit 68 is made of a material which has high heat conductivity, e.g. aluminum etc. Therefore, good heat dissipation can advantageously be achieved.

40 Claims

1. A supporting device, in particular a garden tool supporting device, for at least one electrical unit (12) of electrically driveable tools, in particular electrically driveable garden tools, comprising:

45 at least one base plate (16) to which said electrical unit (12) is attachable;
 at least one receptacle unit (18) in which said electrical unit (12) is arrangeable;
 and at least one sealing unit (20) to waterproof-seal said receptacle unit (18);
 wherein said sealing unit (20) comprises at least one sealing element (22) which is arrangeable at said receptacle unit (18), wherein the base plate (16) is embodied as a heat sink base plate, **characterised in that** the electrical unit (12) comprises at least one electrical wire (56), which

- extends from an inside of the receptacle unit (18) to an outside of the receptacle unit (18), wherein the sealing unit (20) is provided to waterproof-seal a wire opening of the receptacle unit (18) through which the electrical wire (56) extends, wherein the sealing unit (20) comprises at least one wire opening sealing element.
2. The supporting device as defined in Claim 1, wherein the receptacle unit (18) comprises at least one cover element (24) to close at least one receptacle opening of at least one receptacle chamber (26) of said receptacle unit (18).
 3. The supporting device as defined in Claim 2, wherein said sealing element (22) is arranged between said cover element (24) and a border portion (28) of said receptacle chamber (26), which limits said receptacle opening.
 4. The supporting device as defined in any one of the preceding Claims, wherein at least one receptacle element of said receptacle unit (18) is formed integrally with said base plate (16).
 5. The supporting device as defined in Claim 4, wherein said receptacle element is embodied as a receptacle chamber (26) of said receptacle unit (18) in which said electrical unit (12) is arrangeable.
 6. An electrically driveable tool, in particular an electrically driveable brushcutter, comprising: at least one supporting device as defined in any one of the preceding Claims.
 7. The electrically driveable tool as defined in Claim 6, further comprising at least one guidance rod (30) to which said base plate (16) is directly secureable.
 8. The electrically driveable tool as defined in Claim 7, wherein the guidance rod (30) is located adjacent to at least one further waterproof-sealed receptacle chamber (32) of said receptacle unit (18).
 9. The electrically driveable tool as defined in any one of Claims 6 to 8, wherein said base plate (16) comprises a connection portion (34) which at least partly encompasses said guidance rod (30) at least in a mounted state.
- Patentansprüche**
1. Unterstützungsvorrichtung, insbesondere Gartenwerkzeug-Unterstützungsvorrichtung, für wenigstens eine elektrische Einheit (12) elektrisch antreibbarer Werkzeuge, insbesondere elektrisch antreibbarer Gartenwerkzeuge, die Folgendes umfasst:
 2. Unterstüzungsvorrichtung nach Anspruch 1, wobei die Aufnahmebehältereinheit (18) wenigstens ein Abdeckelement (24) enthält, um wenigstens eine Aufnahmebehälteröffnung wenigstens einer Aufnahmebehälterkammer (26) der Aufnahmebehältereinheit (18) zu verschließen.
 3. Unterstüzungsvorrichtung nach Anspruch 2, wobei das Dichtungselement (22) zwischen dem Abdeckelement (24) und einem Randabschnitt (28) der Aufnahmebehälterkammer (26), der die Aufnahmebehälteröffnung begrenzt, angeordnet ist.
 4. Unterstüzungsvorrichtung nach einem der vorhergehenden Ansprüche, wobei wenigstens ein Aufnahmebehälterelement der Aufnahmebehältereinheit (18) einteilig mit der Grundplatte (16) ausgebildet ist.
 5. Unterstüzungsvorrichtung nach Anspruch 4, wobei das Aufnahmebehälterelement als eine Aufnahmebehälterkammer (26) der Aufnahmebehältereinheit (18), in der die elektrische Einheit (12) angeordnet werden kann, konfiguriert ist.
 6. Elektrisch antreibbares Werkzeug, insbesondere Gebüschschneider, das Folgendes umfasst: wenigstens eine Unterstüzungsvorrichtung nach einem der vorhergehenden Ansprüche.
 7. Elektrisch antreibbares Werkzeug nach Anspruch 6, dass ferner wenigstens einen Führungsstab (30) aufweist, an dem die Grundplatte (16) direkt befestigt

werden kann.

8. Elektrisch antreibbares Werkzeug nach Anspruch 7, wobei sich der Führungsstab (30) in der Nähe wenigstens einer weiteren wasserdicht verschlossenen Aufnahmebehälterkammer (32) der Aufnahmebehältereinheit (18) befindet.
9. Elektrisch antreibbares Werkzeug nach einem der Ansprüche 6 bis 8, wobei die Grundplatte (16) einen Verbindungsabschnitt (34) aufweist, der den Führungsstab (30) zumindest in einem montierten Zustand wenigstens teilweise umgibt.

Revendications

1. Dispositif porteur, en particulier un dispositif porteur d'outil de jardin, pour au moins une unité électrique (12) d'outils pouvant être entraînés électriquement, en particulier d'outils de jardin pouvant être entraînés électriquement, comportant :

au moins une plaque (16) de base à laquelle ladite unité électrique (12) peut être fixée ;
au moins une unité (18) de réceptacle dans laquelle ladite unité électrique (12) peut être disposée ; et

au moins une unité (20) d'étanchéité servant à sceller de manière imperméable à l'eau ladite unité (18) de réceptacle ;

ladite unité (20) d'étanchéité comportant au moins un élément (22) d'étanchéité qui peut être disposé au niveau de ladite unité (18) de réceptacle, la plaque (16) de base étant concrétisée comme une plaque de base dissipatrice de chaleur, **caractérisée en ce que** l'unité électrique (12) comporte au moins un fil électrique (56), qui s'étend d'un intérieur de l'unité (18) de réceptacle à un extérieur de l'unité (18) de réceptacle, l'unité (20) d'étanchéité étant mise en place pour sceller de manière imperméable à l'eau une ouverture de fil de l'unité (18) de réceptacle à travers laquelle s'étend le fil électrique (56), l'unité (20) d'étanchéité comportant au moins un élément d'étanchéité d'ouverture de fil.

2. Dispositif porteur selon la revendication 1, l'unité (18) de réceptacle comportant au moins un élément (24) de couvercle servant à fermer au moins une ouverture de réceptacle d'au moins une chambre (26) de réceptacle de ladite unité (18) de réceptacle.
3. Dispositif porteur selon la revendication 2, ledit élément (22) d'étanchéité étant disposé entre ledit élément (24) de couvercle et une partie (28) de bordure de ladite chambre (26) de réceptacle, qui limite ladite ouverture de réceptacle.

4. Dispositif porteur selon l'une quelconque des revendications précédentes, au moins un élément de réceptacle de ladite unité (18) de réceptacle étant formé de façon intégrée avec ladite plaque (16) de base.

5. Dispositif porteur selon la revendication 4, ledit élément de réceptacle étant concrétisé comme une chambre (26) de réceptacle de ladite unité (18) de réceptacle dans laquelle ladite unité électrique (12) peut être disposée.

6. Outil pouvant être entraîné électriquement, en particulier débroussailleuse pouvant être entraînée électriquement, comportant :
au moins un dispositif porteur selon l'une quelconque des revendications précédentes.

7. Outil pouvant être entraîné électriquement selon la revendication 6, comportant en outre au moins une tige (30) de guidage à laquelle ladite plaque (16) de base peut être directement fixée.

8. Outil pouvant être entraîné électriquement selon la revendication 7, la tige (30) de guidage étant située au voisinage d'au moins une autre chambre (32) de réceptacle scellée de manière imperméable à l'eau de ladite unité (18) de réceptacle.

9. Outil pouvant être entraîné électriquement selon l'une quelconque des revendications 6 à 8, ladite plaque (16) de base comportant une partie (34) de liaison qui enveloppe au moins partiellement ladite tige (30) de guidage au moins dans un état monté.

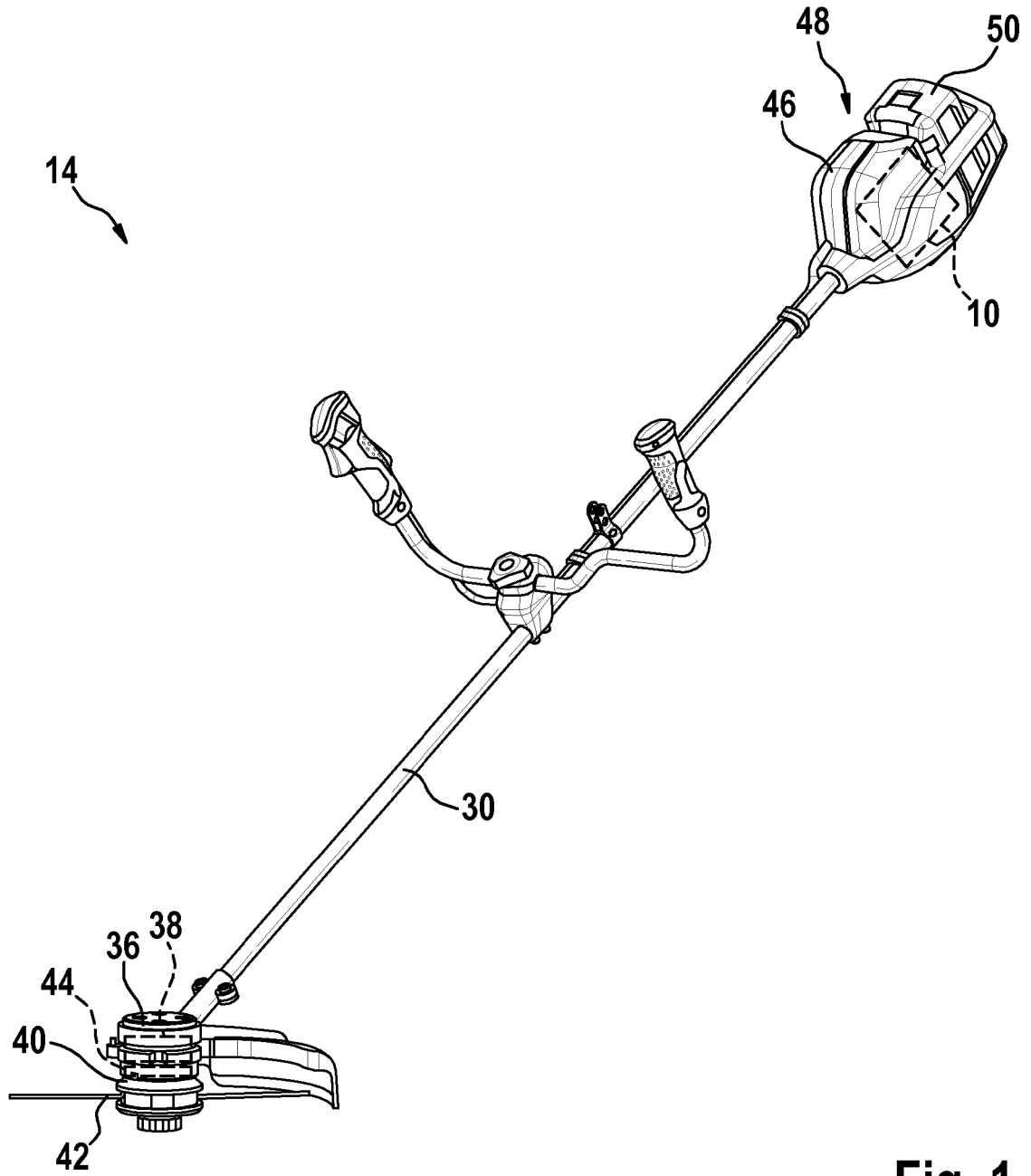


Fig. 1

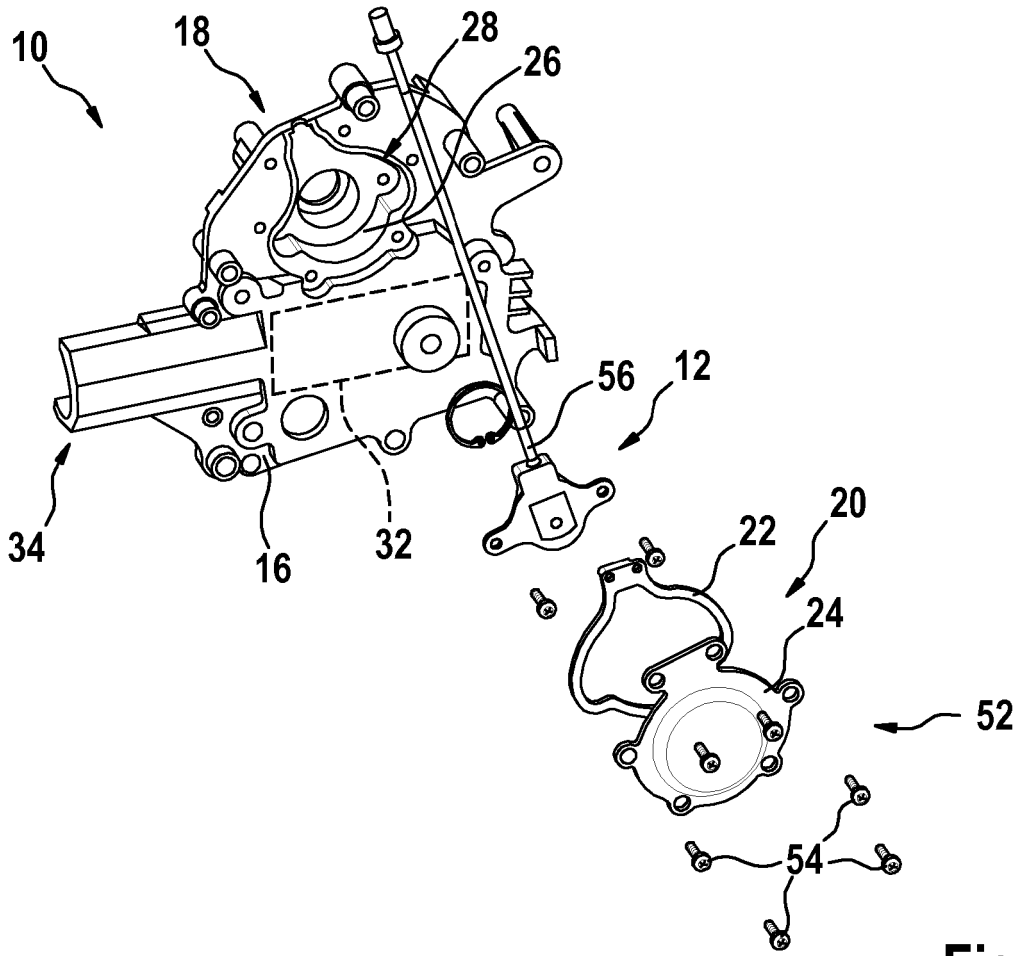


Fig. 2

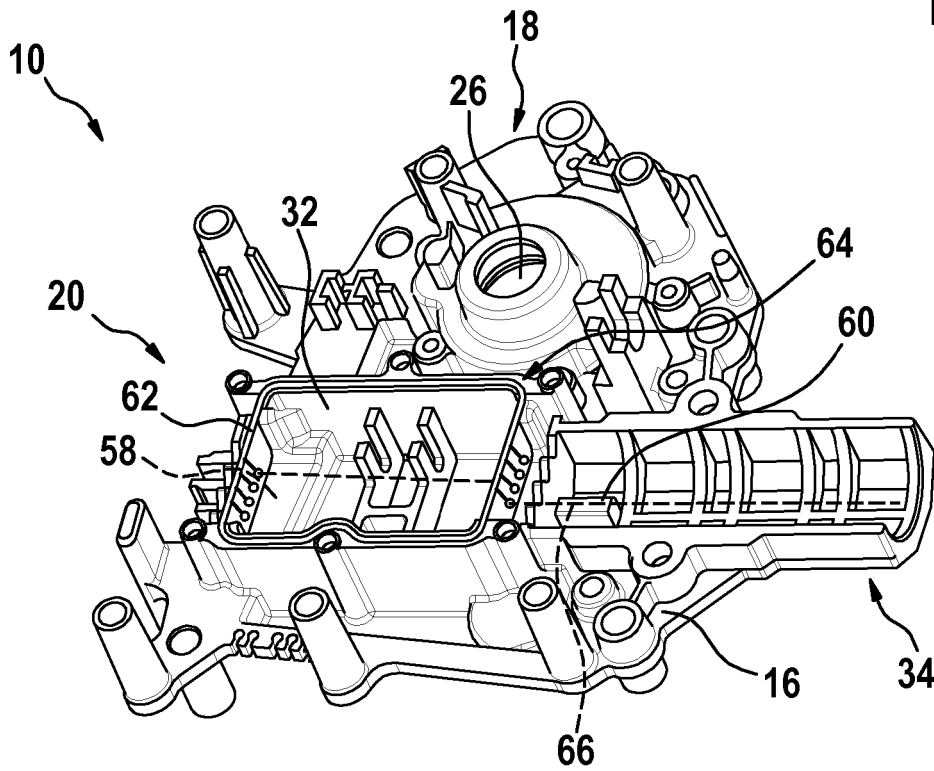


Fig. 3

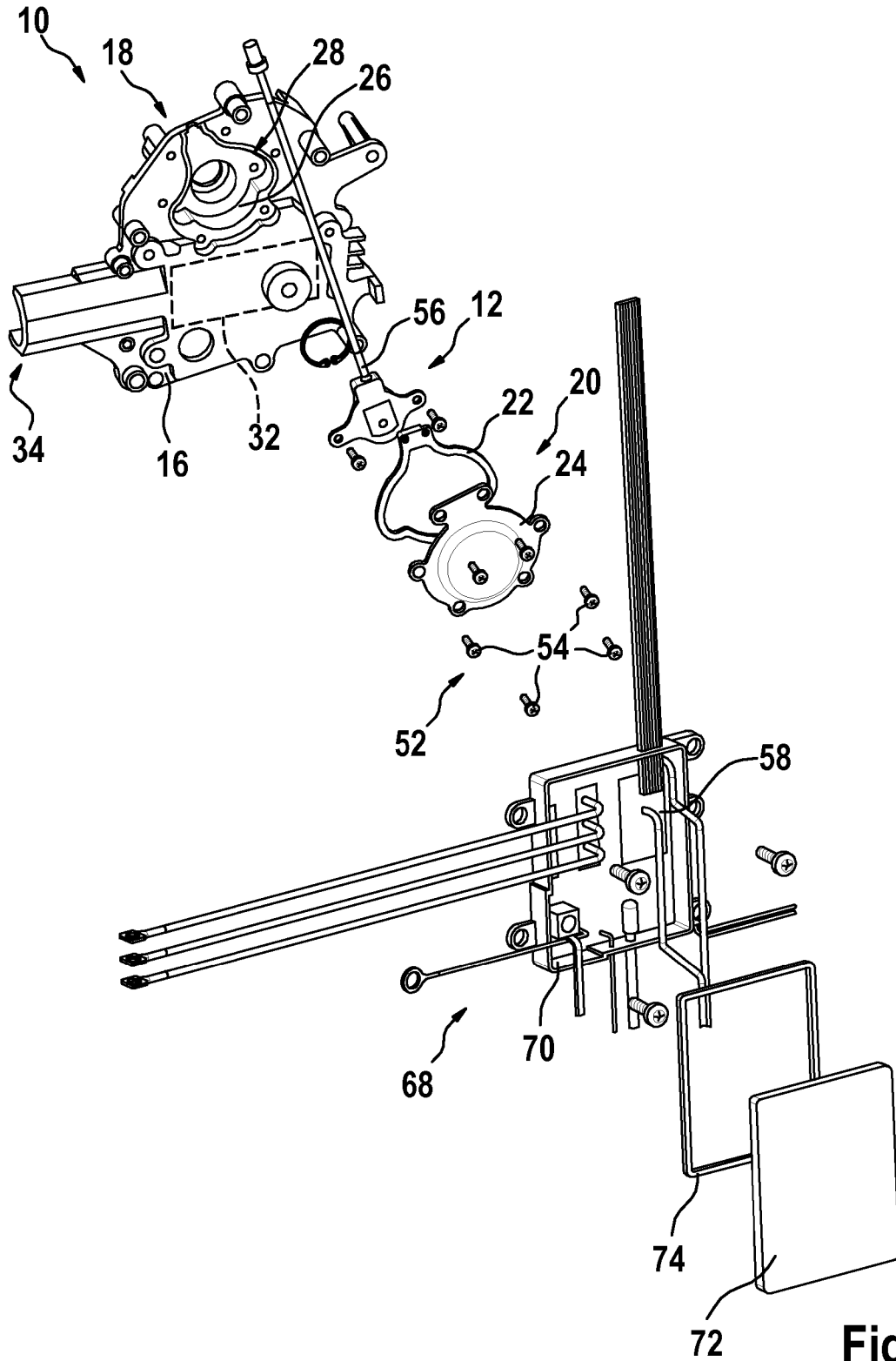


Fig. 4

REFERENCES CITED IN THE DESCRIPTION

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